

BNG: Biodiversity Net Gain Assessment

Site: 16 BENNET ROAD, READING,
RG2 0QX

Ref: 776952 / SJ2

Client: W3 Construction



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Revision	Description	Date
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EXECUTIVE SUMMARY

SJ Ecology & Environment was commissioned by W3 Construction to undertake a Biodiversity Net Gain (BNG) assessment of 16 Bennet Road, Reading, RG2 0QX. Full planning permission is sought from Reading Borough Council for the Erection of workshop building (Class B2) following demolition of existing building (Sui Generis).

The proposed area encompasses approximately 0.35 hectares and includes developed Land; sealed surfaces, buildings and mixed scrub. Pre-degraded habitats were also noted such as modified grassland and urban trees. These habitats, whilst not currently present on site in a recognisable form, were identified as having been removed or significantly degraded as a result of recent site activities. The site is located within the south of Reading within a large industrial estate. The wider landscape is characterised by both commercial and residential development and a large recreational ground. The surrounding area also includes areas of grassland, mature trees and hedgerows, with the latter providing some ecological connectivity to the wider landscape.

The Biodiversity Net Gain (BNG) assessment was completed using the 'Statutory Biodiversity Metric' (Natural England, 2024). The recommendations are based on the site's current conditions as observed during the survey and based on the site's current conditions as observed during the survey and based on Proposed Site Plan provided by the client.

The baseline value of the site is 2.11 habitat units and 0.00 hedgerow units. The post-development future value of the site is expected to be 0.15 habitat units and 0.00 hedgerow units. This will result in a total net loss of -92.83% for habitat units and n/a for hedgerow units (due to zero baseline). The current proposals do not pass the trading rules of the DEFRA metric (Natural England, 2023).

This report has been prepared by a suitably qualified and experienced ecologist. The results and recommendations presented reflect the professional opinion of the author, based on information supplied by the client, details of the proposed development, and the findings of the desk study and field survey work.

REPORT INFORMATION

Site Address	16 Bennet Road, Reading, RG2 0QX
Central Grid Reference	SU 71293 70092
Report Author	Sam James BA (<i>Hons</i>) MA PGDip (<i>Ecology</i>) ACIEEM
Report Reviewer	NS BSc (<i>Hons</i>)

1) INTRODUCTION

SJ Ecology & Environment was commissioned by W3 Construction to undertake a Biodiversity Net Gain (BNG) assessment of 16 Bennet Road, Reading, RG2 0QX. Full planning permission is sought from Reading Borough Council for the Erection of workshop building (Class B2) following demolition of existing building (Sui Generis). The proposed area encompasses approximately 0.35 hectares and includes developed Land; sealed surfaces, buildings and mixed scrub. Pre-degraded habitats were also noted such as modified grassland and urban trees. These habitats, whilst not currently present on site in a recognisable form, were identified as having been removed or significantly degraded as a result of recent site activities. The site is located within the south of Reading within a large industrial estate. The wider landscape is characterised by both commercial and residential development and a large recreational ground. The surrounding area also includes areas of grassland, mature trees and hedgerows, with the latter providing some ecological connectivity to the wider landscape.

The Biodiversity Net Gain (BNG) assessment was completed using the 'Statutory Biodiversity Metric' (Natural England, 2024). The recommendations are based on the site's current conditions as observed during the survey and based on the site's current conditions as observed during the survey and based on Proposed Site Plan provided by the client.

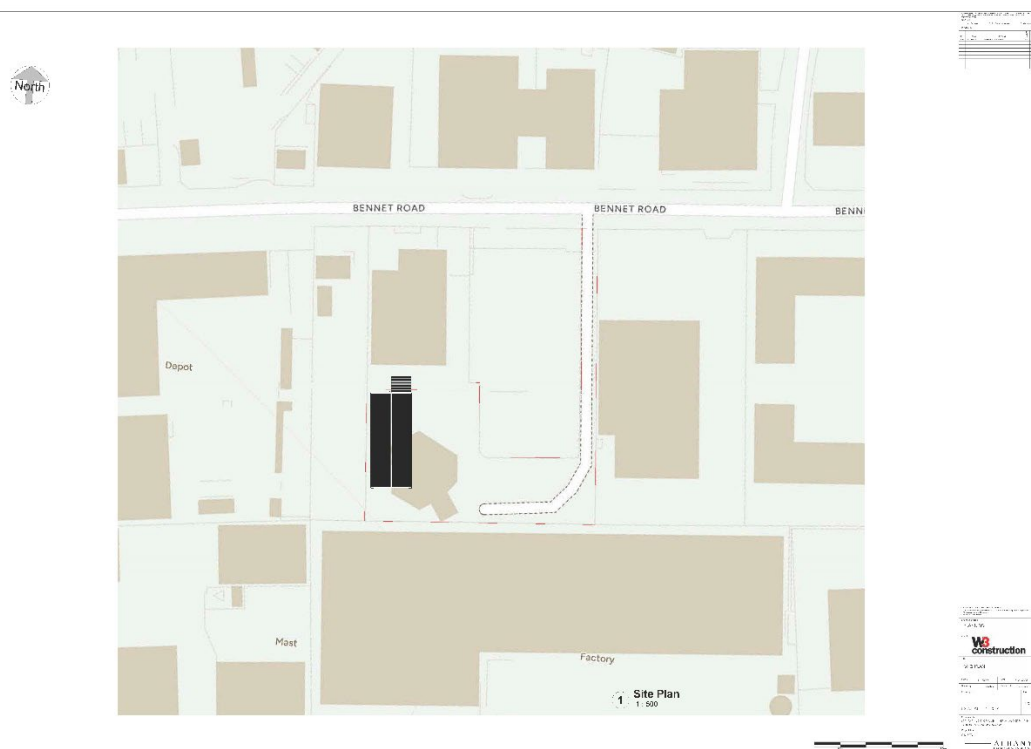


Figure 1: Proposed Site Plan (W3 Construction, OCM-AFE-P- 007)

2) AIMS AND METHODOLOGY

The purpose and aims of the assessment were to:

- Establish the baseline biodiversity value of the habitats on site according to preliminary survey information to calculate a pre-development value.
- Establish the post-development value of the habitats on the site according to development plans to calculate a post-development value.
- Identify the requirement for further survey / assessment work, mitigation, compensation and / or assessment where necessary and propose solutions to meeting BNG targets.

Good Practice Principles

Biodiversity net gain has been defined as 'development that leaves biodiversity in a better state than before, and an approach where developers work with local governments, wildlife grounds, landowners and other stakeholders in order to support their priorities for nature conservation (Baker, 2016). Good practice principles for developments should be applied to a development where possible including:

- Applying the mitigation hierarchy and being additional by achieving outcomes that exceed existing obligations.
- Avoiding biodiversity loss which cannot be offset elsewhere (e.g., irreplaceable habitats).
- Quantifying risk appropriately – e.g., is there a difficulty creating or enhancing specific habitats according to the site?
- Making a measurable net gain contribution that is calculated using appropriate metric and ensuring that the calculation are consistent and transparent with limitations and assumptions clearly identified.
- Ensure that the net gain design achieves the best outcome for biodiversity – this may require quantitative and qualitative assessment – and create a net gain legacy for long-term benefits.

Methodology

The BNG calculation tool used for this assessment is the 'Statutory Biodiversity Metric' (SBC) published in July 2024 by Natural England (Natural England, 2024). This tool objectively calculates the biodiversity losses and gains for habitats in relation to the proposed development. The SBC requires all habitat data to be categorised according to the UK Habitat Classification (Butcher et al., 2020) and this was most recently completed in August 2024.

All condition assessments were carried out at suitable times of the year. The habitats were then mapped into a digital map using QGIS coordinate reference systems OSGB 1936/National Grid and a baseline habitat map can be viewed in Appendix 1. Habitats recorded on site were measured using the derived areas (Ellipsoidal – EPSG 7001) with habitat areas provided in hectares and hedgerow areas provided in kilometres.

The type and condition of the habitats were assessed during the site survey. The distinctiveness of the habitats is pre-defined by the SBC. The following plans, policies and/or strategies were also viewed to determine whether the habitat has formally been identified in a strategy, UK Biodiversity Action Plans and Green Infrastructure Strategies. All calculations were inserted into the BNG calculator using the technical data.

Trading Summaries

The term trading up is a concept which requires conserving through offset components of biodiversity that are of a higher conservation priority (for example, they tend to be more irreplaceable and vulnerable and are harder to recreate) than those affected by the development project for which the offset is envisaged. For example, should non-irreplaceable habitats be lost or impacted as a result of the proposed development, it will be necessary to create or enhance habitats that are of the same or higher distinctiveness.

Assessment Limitations and Assumptions

A small number of limitations were noted but it is considered that an accurate assessment of the site's ecological value has been obtained:

- BNG assessments and calculations can only provide a proxy measure for the real long-term biodiversity changes that occur on any given site.
- The assessment does not give credit, in terms of a score / biodiversity units, to any actions that are taken as part of the development that add features to the site such as bird and bat boxes which support certain species groups. Such measures are beyond the scope of this report.

Report Lifespan

Given the transient nature of the subject, the survey results are considered valid for up to 18 months.

3) SURVEY RESULTS AND EVALUATION

Site Baseline

The proposed area encompasses approximately 0.35 hectares and includes developed Land; sealed surfaces, buildings and mixed scrub. Pre-degraded habitats were also noted such as modified grassland and urban trees*. A plan of the existing habitats can be viewed in Appendix 1 and the condition assessments for these habitats are provided in Appendix 4, where applicable.

The baseline value of the site is 2.11 habitat units and 0.00 hedgerow units.

Table 1. Baseline Habitats and Corresponding Information. *Numbers are based on rounded figures, check the associated metric calculator for more information.

AREA BASED HABITATS			
HABITAT	AREA (HA)	DESCRIPTION (DISTINCTIVENESS, CONDITION, CONNECTIVITY, AND STRATEGIC SIGNIFICANCE)	VALUE (UNITS)
Developed land; sealed surface	0.2187	Very Low distinctiveness, condition assessment not required for this habitat type. Low Strategic Significance. Area/compensation not in local strategy/ no local strategy.	0.00
Modified Grassland*	0.0755	Low distinctiveness, condition assessed as achieving a poor condition. Low Strategic Significance. Area/compensation not in local strategy/ no local strategy	0.15
Mixed Scrub	0.0655	Medium distinctiveness, condition assessed as achieving a moderate condition. Low Strategic Significance. Area/compensation not in local strategy/ no local strategy	0.26
Urban Tree*	0.2117	Medium distinctiveness, condition assessed as achieving a moderate condition. Low Strategic Significance. Area/compensation not in local strategy/ no local strategy	1.69
TOTAL AREA (HA)	0.36ha (ex-trees)	TOTAL BASELINE VALUE (HABITAT UNITS)	2.11

Site Proposed

The post-development habitats and corresponding future values are set out in the proposed habitat map (see Appendix 2). The condition assessments for the future habitats are provided in Appendix 3, where applicable.

The Biodiversity Net Gain (BNG) assessment was completed using the 'Statutory Biodiversity Metric' (Natural England, 2024). The recommendations are based on the site's current conditions as observed during the survey and based on the Proposed Site Plan provided by the client.

Table 2. Future Baseline and Corresponding Habitats.

AREA BASED HABITATS (RETAINED)			
HABITAT	AREA (HA)	DESCRIPTION (DISTINCTIVENESS, CONDITION, CONNECTIVITY, AND STRATEGIC SIGNIFICANCE)	VALUE (UNITS)
Developed land; sealed surface	0.1404	Very Low distinctiveness, condition assessment not required for this habitat type. Low Strategic Significance. Area/compensation not in local strategy/ no local strategy.	0.00
Modified Grassland	0.0755	Low distinctiveness, condition assessed as achieving a poor condition. Low Strategic Significance. Area/compensation not in local strategy/ no local strategy. <i>Management strategy to be implemented in the HMMP to recover areas of lost grassland.</i>	0.15
TOTAL AREA (HA)	0.22ha	TOTAL BASELINE VALUE (HABITAT UNITS)	0.15
AREA BASED HABITATS (PROPOSED)			
HABITAT	AREA (HA)	DESCRIPTION (DISTINCTIVENESS, CONDITION, CONNECTIVITY, AND STRATEGIC SIGNIFICANCE)	VALUE (UNITS)
Developed land; sealed surface	0.1438	Very Low distinctiveness, condition assessment not required for this habitat type. Low Strategic Significance. Area/compensation not in local strategy/ no local strategy.	0.00
TOTAL AREA (HA)	0.14ha	TOTAL BASELINE VALUE (HABITAT UNITS)	0.00

Habitat Trading Requirements

The site does not pass the habitat trading requirements to provide the “same broad habitat or higher distinctiveness habitat” required by the trading standards of the SBC (Natural England, 2023).

Assessment Results

The Biodiversity Net Gain (BNG) assessment was completed using the ‘Statutory Biodiversity Metric’ (Natural England, 2024). The recommendations are based on the site’s current conditions as observed during the survey and based on the site’s current conditions as observed during the survey and based on Proposed Site Plan provided by the client.

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Table 3. The Biodiversity Net Gain (BNG) assessment Results.

	HABITAT VALUE	HEDGEROW VALUE
BASELINE VALUE	2.11	0.00
FUTURE VALUE	0.15	0.00
TOTAL NET % CHANGE	-92.83%	n/a
TRADING RULES	NOT PASSED	

4) RECOMMENDATIONS AND CONCLUSIONS

SJ Ecology & Environment was commissioned by W3 Construction to undertake a Biodiversity Net Gain (BNG) assessment of 16 Bennet Road, Reading, RG2 0QX. Full planning permission is sought from Reading Borough Council for the Erection of workshop building (Class B2) following demolition of existing building (Sui Generis).

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Due to the extent of habitat creation required to achieve the mandatory 10% Biodiversity Net Gain and the nature of the proposed development, on-site habitat enhancements are not considered feasible or deliverable. The scale and layout of the scheme limit opportunities for meaningful habitat creation or long-term management. It is therefore recommended that off-site solutions are pursued, such as the purchase of statutory biodiversity credits or units from a suitable third-party provider, to ensure compliance with BNG requirements.

This report has been prepared by a suitably qualified and experienced ecologist. The results and recommendations presented reflect the professional opinion of the author, based on information supplied by the client, details of the proposed development, and the findings of the desk study and field survey work.

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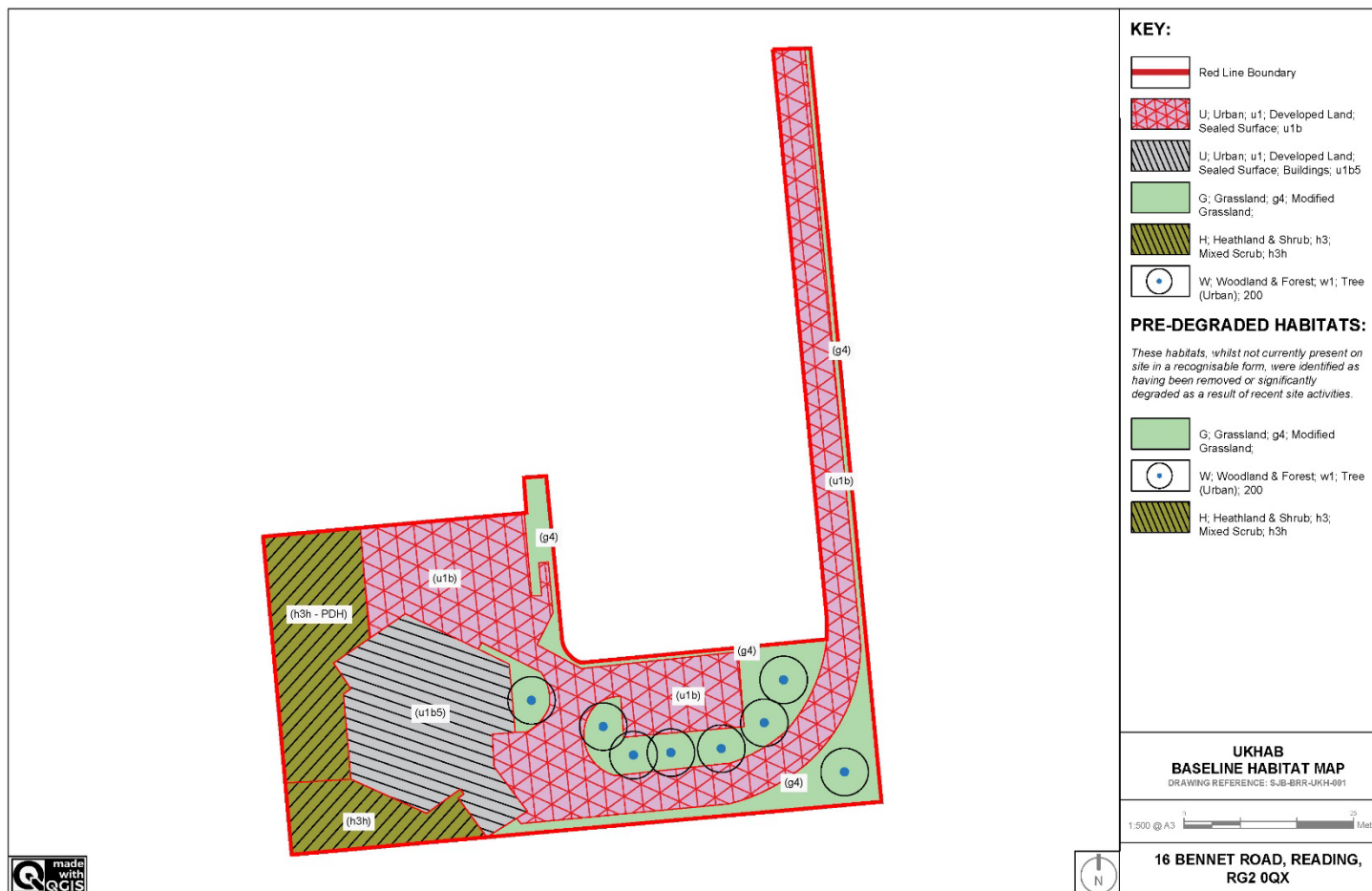
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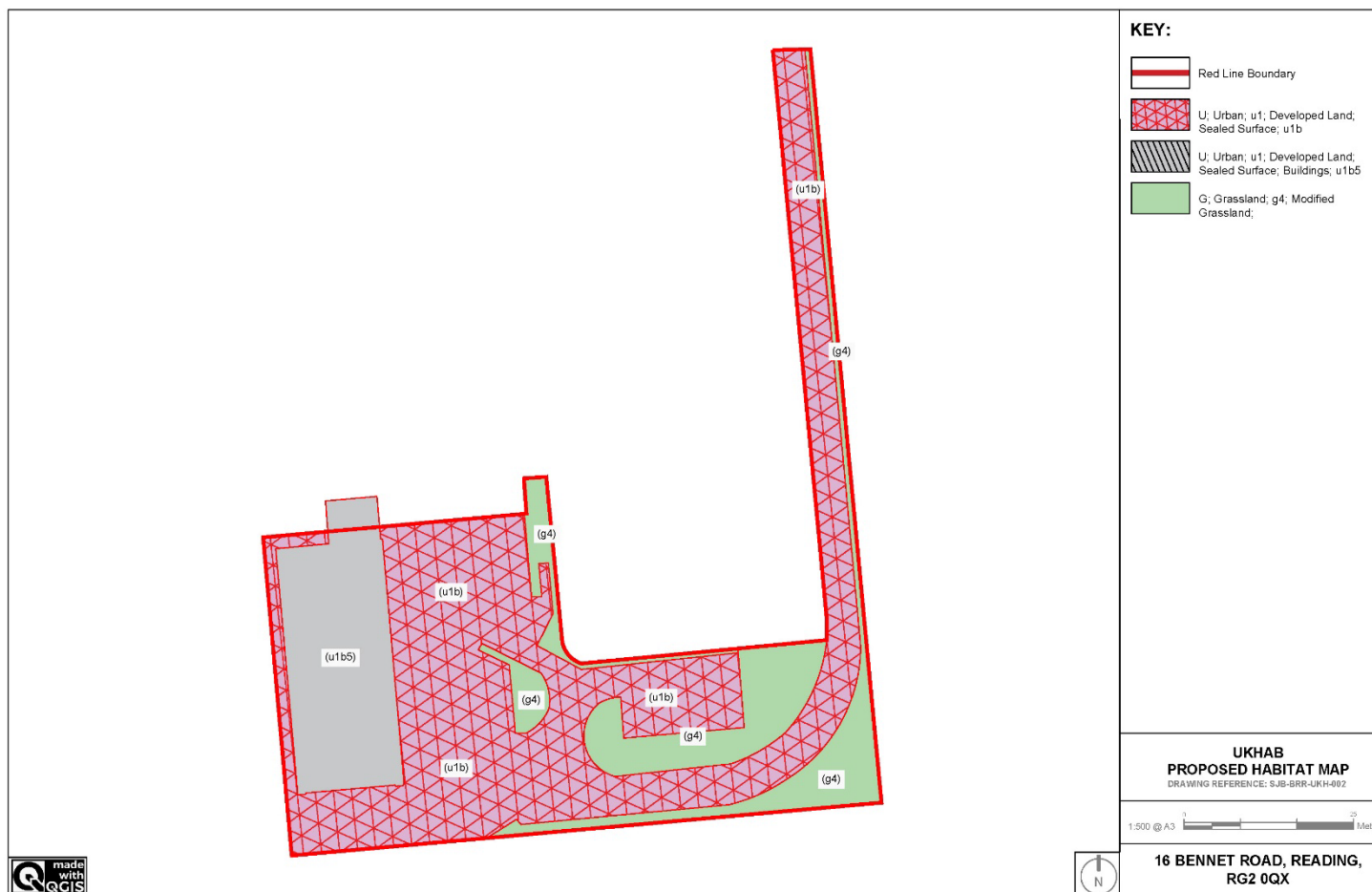
CAVEAT

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APPENDIX 1 – BASELINE HABITAT MAP



APPENDIX 2 – PROPOSED HABITAT MAP



APPENDIX 4 – CONDITION ASSESSMENTS FOR BASELINE/PROPOSED HABITATS

Baseline Habitats

Habitats that do not have a condition Assessment:

- U; Urban; u1; Developed Land; Sealed Surface; u1b
- U; Urban; u1; Developed Land; Sealed Surface; Buildings; u1b5

Modified Grassland

Condition Assessment Criteria		Criterion passed (Yes or No)
A	There are 6-8 vascular plant species per m2 present, including at least 2 forbs (these may include those listed in Footnote 1). Note - this criterion is essential for achieving Moderate or Good condition. <i>Where the vascular plant species present are characteristic of medium, high or very high distinctiveness grassland, or there are 9 or more of these characteristic species per m2 (excluding those listed in Footnote 1), please review the full UKHab description to assess whether the grassland should instead be classified as a higher distinctiveness grassland. Where a grassland is classed as medium, high, or very high distinctiveness, please use the relevant condition sheet.</i>	N
B	Sward height is varied (at least 20% of the sward is less than 7 cm and at least 20% is more than 7 cm) creating microclimates which provide opportunities for vertebrates and invertebrates to live and breed.	N
C	Any scrub present accounts for less than 20% of the total grassland area. (Some scattered scrub such as bramble <i>Rubus fruticosus</i> agg. may be present). <i>Note - patches of scrub with continuous (more than 90%) cover should be classified as the relevant scrub habitat type.</i>	Y
D	Physical damage is evident in less than 5% of total grassland area. Examples of physical damage include excessive poaching, damage from machinery use or storage, erosion caused by high levels of access, or any other damaging management activities.	N
E	Cover of bare ground is between 1% and 10%, including localised areas (for example, a concentration of rabbit warrens).	N
F	Cover of bracken <i>Pteridium aquilinum</i> is less than 20%.	Y
G	There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA4).	N
Final Condition Score: Passes 3 or fewer criteria; OR Passes 4 - 6 criteria (excluding criterion A) = Poor Passes 4 or 5 criteria including passing essential criterion A = Moderate Passes 6 or 7 criteria including passing essential criterion A = Good		Poor

Individual Trees (Urban)

Due to a lack of clear evidence, the pre-degradation condition could not be established with certainty. A precautionary approach has therefore been adopted, with the benefit of the doubt applied where reasonable evidence to the contrary was not available. Based on the nature, location, and urban context of the site, together with observations of comparable trees in the surrounding area, it is considered unlikely that criteria D and F would have been met. The absence of surrounding vegetation suggests that the majority of any former canopy would have extended over hardstanding, and trees would likely have been subject to constraints typical of urban environments. It is also considered probable that adverse impacts associated with limited management, such as the absence of a regular pruning regime, would have affected overall condition.

Condition Assessment Criteria		Criterion passed (Yes or No)
A	The tree is a native species (or at least 70% within the block are native species).	Y
B	The tree canopy is predominantly continuous, with gaps in canopy cover making up <10% of total area and no individual gap being >5 m wide (individual trees automatically pass this criterion).	Y
C	The tree is mature (or more than 50% within the block are mature).	Y
D	There is little or no evidence of an adverse impact on tree health by human activities (such as vandalism, herbicide or detrimental agricultural activity). And there is no current regular pruning regime, so the trees retain >75% of expected canopy for their age range and height.	N
E	Natural ecological niches for vertebrates and invertebrates are present, such as presence of deadwood, cavities, ivy or loose bark.	Y
F	More than 20% of the tree canopy area is oversailing vegetation beneath.	N
Final Condition Score: Passes 2 or fewer criteria = Poor Passes 3 or 4 criteria = Moderate Passes 5 or 6 criteria = Good		Moderate

Mixed Scrub

Due to a lack of clear evidence, the pre-degradation condition could not be established with certainty. A precautionary approach has therefore been adopted, with the benefit of the doubt applied where reasonable evidence to the contrary was not available. Based on the location and context of the habitat, it is considered likely that the area comprised pioneer scrub rather than a well-established stand, and the surrounding land use would not support it being a good example of this habitat type. The scrub appeared to be physically constrained by adjacent fencing and buildings, limiting its extent and structure; therefore, the development of a diverse, well-formed edge is considered unlikely.

Condition Assessment Criteria		Criterion passed (Yes or No)
A	The parcel represents a good example of its habitat type - the appearance and composition of the vegetation closely matches its UKHab description (where in its natural range). - At least 80% of scrub is native, - There are at least three native woody species - No single species comprises more than 75% of the cover (except hazel) Corylus avellana, common juniper Juniperus communis, sea buckthorn Hippophae rhamnoides (only in its restricted native range), or box Buxus sempervirens, which can be up to 100% cover).	N
B	Seedlings, saplings, young shrubs and mature (or ancient or veteran) shrubs are all present.	Y
C	There is an absence of invasive non-native plant species (as listed on Schedule 9 of WCA5) and species indicative of suboptimal condition ⁶ make up less than 5% of ground cover.	Y
D	The scrub has a well-developed edge with scattered scrub and tall grassland and or forbs present between the scrub and adjacent habitat.	N
E	There are clearings, glades or rides present within the scrub, providing sheltered edges.	Y
Final Condition Score: Passes 2 or fewer criteria = Poor Passes 3 or 4 criteria = Moderate Passes 5 criteria = Good		Moderate

Proposed Habitats

Habitats that do not have a condition Assessment:

- U; Urban; u1; Developed Land; Sealed Surface; u1b
- U; Urban; u1; Developed Land; Sealed Surface; Buildings; u1b5

END OF REPORT

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